#### SEQUENCE LISTING

<110> Brooks, Cydney C. <120> USE OF INSULIN RESPONSE MODULATORS IN THE TREATMENT OF DIABETES AND INSULIN RESISTANCE <130> ADY-001B <150> 60/406,618 <151> 2002-08-27 <160> 3 <170> FastSEQ for Windows Version 4.0 <210> 1 <211> 1025 <212> PRT <213> Homo sapiens Met Glu Pro Phe Thr Asn Asp Arg Leu Gln Leu Pro Arg Asn Met Ile 10 Glu Asn Ser Met Phe Glu Glu Glu Pro Asp Val Val Asp Leu Ala Lys 25 Glu Pro Cys Leu His Pro Leu Glu Pro Asp Glu Val Glu Tyr Glu Pro 40 Arg Gly Ser Arg Leu Leu Val Arg Gly Leu Gly Glu His Glu Met Glu 55 Glu Asp Glu Glu Asp Tyr Glu Ser Ser Ala Lys Leu Leu Gly Met Ser 70 75 Phe Met Asn Arg Ser Ser Gly Leu Arg Asn Ser Ala Thr Gly Tyr Arg 90 85 Gln Ser Pro Asp Gly Ala Cys Ser Val Pro Ser Ala Arg Thr Met Val 100 105 Val Cys Ala Phe Val Ile Val Val Ala Val Ser Val Ile Met Val Ile 120 Tyr Leu Leu Pro Arg Cys Thr Phe Thr Lys Glu Gly Cys His Lys Lys 135 140 Asn Gln Ser Ile Gly Leu Ile Gln Pro Phe Ala Thr Asn Gly Lys Leu 150 155 Phe Pro Trp Ala Gln Ile Arg Leu Pro Thr Ala Val Val Pro Leu Arg 165 170 Tyr Glu Leu Ser Leu His Pro Asn Leu Thr Ser Met Thr Phe Arg Gly 180 185 Ser Val Thr Ile Ser Val Gln Ala Leu Gln Val Thr Trp Asn Ile Ile 200 Leu His Ser Thr Gly His Asn Ile Ser Arg Val Thr Phe Met Ser Ala 215 Val Ser Ser Gln Glu Lys Gln Ala Glu Ile Leu Glu Tyr Ala Tyr His 230 235 Gly Gln Ile Ala Ile Val Ala Pro Glu Ala Leu Leu Ala Gly His Asn

245

260

250

Tyr Thr Leu Lys Ile Glu Tyr Ser Ala Asn Ile Ser Ser Ser Tyr Tyr 265

Gly Phe Tyr Gly Phe Ser Tyr Thr Asp Glu Ser Asn Glu Lys Lys Tyr

		275					280					285			
Phe	Ala 290		Thr	Gln	Phe	Glu 295		Leu	Ala	Ala	Arg 300		Ala	Phe	Pro
Cys 305	Phe	Asp	Glu	Pro	Ala 310	Phe	Lys	Ala	Thr	Phe 315	Ile	Ile	Lys	Ile	Ile 320
Arg	Asp	Glu	Gln	Tyr 325	Thr	Ala	Leu	Ser	Asn 330	Met	Pro	Lys	Lys	Ser 335	Ser
Val	Val	Leu	Asp 340	Asp	Gly	Leu	Val	Gln 345	Asp	Glu	Phe	Ser	Glu 350	Ser	Val
Lys	Met	Ser 355	Thr	Tyr	Leu	Val	Ala 360	Phe	Ile	Val	Gly	Glu 365	Met	Lys	Asn
	370					375					380			Val	
385					390					395				Lys	400
				405		_			410		_			Lys 415	
			420					425					430	Glu	
		435				_	440					445	_	Ser	
	450					455					460			Ala	
465					470					475				Trp	480
				485					490					Tyr 495	
			500					505					510	Phe	
		515					520					525		Ser	
	530					535					540			Met	
545					550					555				Leu Tyr	560
				565					570					575 Asp	
			580					585					590	Met	
		595					600					605		Lys	
	610				_	615					620			Met	_
625	_				630				_	635				Pro	640
				645					650					655 Val	
			660			Gly		665					670	Val	
		675	_	_		_	680					685		His	
	690					695					700				
705	_	_	_	_	710					715		_		Asn	720
туr	val	ьeu	ser	725	гуѕ	Asp	Arg	Ala	730	ьeu	тте	Asn	Asn	Ile 735	Fue

```
Glu Leu Ala Gly Leu Gly Lys Val Pro Leu Lys Arg Ala Phe Asp Leu
            740
                               745
Ile Asn Tyr Leu Gly Asn Glu Asn His Thr Ala Pro Ile Thr Glu Ala
                           760
Leu Phe Gln Thr Asp Leu Ile Tyr Asn Leu Leu Glu Lys Leu Gly Tyr
                       775
Met Asp Leu Ala Ser Arg Leu Val Thr Arg Val Phe Lys Leu Leu Gln
                    790
                                       795
Asn Gln Ile Gln Gln Gln Thr Trp Thr Asp Glu Gly Thr Pro Ser Met
                805
                                   810
Arg Glu Leu Arg Ser Ala Leu Leu Glu Phe Ala Cys Thr His Asn Leu
           820
                               825
Gly Asn Cys Ser Thr Thr Ala Met Lys Leu Phe Asp Asp Trp Met Ala
                           840
Ser Asn Gly Thr Gln Ser Leu Pro Thr Asp Val Met Thr Thr Val Phe
                       855
                                          860
Lys Val Gly Ala Lys Thr Asp Lys Gly Trp Ser Phe Leu Leu Gly Lys
                   870
                                       875
Tyr Ile Ser Ile Gly Ser Glu Ala Glu Lys Asn Lys Ile Leu Glu Ala
               885
                                   890
Leu Ala Ser Ser Glu Asp Val Arg Lys Leu Tyr Trp Leu Met Lys Ser
           900 .
                               905
Ser Leu Asn Gly Asp Asn Phe Arg Thr Gln Lys Leu Ser Phe Ile Ile
                           920
                                              925
Arg Thr Val Gly Arg His Phe Pro Gly His Leu Leu Ala Trp Asp Phe
                       935
                                          940
Val Lys Glu Asn Trp Asn Lys Leu Val Gln Lys Phe Pro Leu Gly Ser
       950
                                       955
Tyr Thr Ile Gln Asn Ile Val Ala Gly Ser Thr Tyr Leu Phe Ser Thr
              965
                                  970
Lys Thr His Leu Ser Glu Val Gln Ala Phe Phe Glu Asn Gln Ser Glu
           980
                              985
Ala Thr Phe Arg Leu Arg Cys Val Gln Glu Ala Leu Glu Val Ile Gln
       995 1000
Leu Asn Ile Gln Trp Met Glu Lys Asn Leu Lys Ser Leu Thr Trp Trp
           1015
Leu
1025
<210> 2
<211> 1025
<212> PRT
<213> Rattus norvegicus
<400> 2
Met Glu Thr Phe Thr Asn Asp Arg Leu Gln Leu Pro Arg Asn Met Ile
                5
                                  10
Glu Asn Ser Met Phe Glu Glu Glu Pro Asp Val Val Asp Leu Ala Lys
           20
                              25
Glu Pro Cys Leu His Pro Leu Glu Pro Asp Glu Val Glu Tyr Glu Pro
                           40
Arg Gly Ser Arg Leu Leu Val Arg Gly Leu Gly Glu His Glu Met Asp
                      55
Glu Asp Glu Glu Asp Tyr Glu Ser Ser Ala Lys Leu Leu Gly Met Ser
                  70
Phe Met Asn Arg Ser Ser Gly Leu Arg Asn Ser Ala Thr Gly Tyr Arg
```

				85					90					95	
Gln	Ser	Pro	Asp 100	Gly	Thr	Cys	Ser	Val 105	Pro	Ser	Ala	Arg	Thr 110	Leu	Val
Ile	Cys	Val 115	Phe	Val	Ile	Val	Val 120	Ala	Val	Ser	Val	Ile 125	Met	Val	Ile
Tyr	Leu 130	Leu	Pro	Arg	Cys	Thr 135	Phe	Thr	Lys	Glu	Gly 140	Суѕ	His	Lys	Thr
Asn 145	Gln	Ser	Ala	Glu	Leu 150	Ile	Gln	Pro	Ile	Ala 155	Thr	Asn	Gly	Lys	Val 160
Phe	Pro	Trp	Ala	Gln 165	Ile	Arg	Leu	Pro	Thr 170	Ala	Ile	Ile	Pro	Gln 175	Arg
			Ser 180					185					190		
		195	Ile				200					205			
	210		Thr			215					220				
225			Gln		230					235		_		_	240
			Ala	245					250					255	
			Lys 260					265					270		
		275	Gly				280					285			
	290		Thr			295					300				
305			Glu		310		_			315			_		320
			His	325					330					335	
			Glu 340					345					350		
		355	Thr				360					365			
	370		Asp			375					380				
385			Asp		390					395				_	400
			Tyr	405					410					415	_
			Val 420					425					430		
		435	Leu Val				440					445	_		
	450				-	455	-				460				
465			His		470		_			475				-	480
	_		Trp	485			_		490					495	
			Lys 500					505					510		
		515	Phe				520					525			
Pro	11e 530	Ser	Ser	Ser	Val	Gln 535	Ser	Ser	Glu	GIn	Ile 540	Glu	Glu	Met	Phe

Asp 545	Ser	Leu	Ser	Туr	Phe 550	Lys	Gly	Ala	Ser	Leu 555	Leu	Leu	Met	Leu	Lys 560
	Tyr	Leu	Ser	Glu 565		Val	Phe	Gln	His 570		Ile	Ile	Leu	Tyr 575	
His	Asn	His	Ser 580		Ala	Ala	Ile	Gln 585		Asp	Asp	Leu	Trp 590		Ser
Phe	Asn	Glu 595		Thr	Gly	Lys	Thr 600		Asp	Val	Lys	Lys 605	Met	Met	Lys
Thr	Trp 610	Thr	Leu	Gln	Lys	Gly 615	Phe	Pro	Leu	Val	Thr 620	Val	Gln	Arg	Lys
Gly 625	Thr	Glu	Leu	Leu	Leu 630	Gln	Gln	Glu	Arg	Phe 635	Phe	Pro	Ser	Met	Gln 640
Pro	Glu	Ile	Gln	Asp 645	Ser	Asp	Thr	Ser	His 650	Leu	Trp	His	Ile	Pro 655	Ile
Ser	Tyr	Val	Thr 660	Asp	Gly	Arg	Asn	Tyr 665	Ser	Glu	Tyr	Arg	Ser 670	Val	Ser
Leu	Leu	Asp 675	Lys	Lys	Ser	Asp	Val 680	Ile	Asn	Leu	Thr	Glu 685	Gln	Val	Gln
Trp	Val 690	Lys	Val	Asn	Thr	Asn 695	Met	Thr	Gly	Tyr	Tyr 700	Ile	Val	His	Tyr
Ala 705	His	Asp	Gly	Trp	Ala 710	Ala	Leu	Ile	Asn	Gln 715	Leu	Lys	Arg	Asn	Pro 720
				725		Asp			730					735	
			740		_	Lys		745					750		
	-	755		-		Glu	760					765			
	770					Ile 775					780				
785					790	Leu				795					800
				805		Thr			810					815	
_			820			Leu		825			-		830		
		835				Ala	840	_				845			
	850	=				Leu 855			_		860				
865					870	Glu				875					880
Tyr	Ser	Ser	Met	Gly 885	Ser	Glu	Ala	Glu	Lys 890	Asp	Lys	Ile	Leu	Glu 895	Ala
			900		_			905		-	_		910	_	Ser
		915	-	-		Ile	92 <b>0</b>			•		925			
Arg	Thr 930	Val	Gly	Arg	G1n	Phe 935	Pro	Gly	His	Leu	Leu 940	Ala	Trp	Asp	Phe
Val 945	Lys	Glu	Asn	Trp	Asn 950	Lys	Leu	Val	His	Lys 955	Phe	His	Leu	Gly	Ser 960
Tyr	Thr	Ile	Gln	Ser 965	Ile	Val	Ala	Gly	Ser 970	Thr	His	Leu	Phe	Ser 975	Thr
Lys	Thr	His	Leu 980	Ser	Glu	Val	Gln	Glu 985	Phe	Phe	Glu	Asn	Gln 990	Ser	Glu
Ala	Thr	Leu	Gln	Leu	Arg	Cys	Val	Gln	Glu	Ala	Phe	Glu	Val	Ile	Glu

```
1005
                     1000
Leu Asn Ile Gln Trp Met Ala Arg Asn Leu Lys Thr Leu Thr Leu Trp
 1010 1015
                            1020
1025
<210> 3
<211> 962
<212> PRT
<213> Homo sapiens
Met Asn Phe Leu Arg Gly Val Met Gly Gly Gln Ser Ala Gly Pro Gln
1 5
                            10
His Thr Glu Ala Glu Thr Ile Gln Lys Leu Cys Asp Arg Val Ala Ser
       2.0
                         25
Ser Thr Leu Leu Asp Asp Arg Arg Asn Ala Val Arg Ala Leu Lys Ser
                        40
Leu Ser Lys Lys Tyr Arg Leu Glu Val Gly Ile Gln Ala Met Glu His
                    5.5
                                   60
Leu Ile His Val Leu Gln Thr Asp Arg Ser Asp Ser Glu Ile Ile Gly
                70
                                  75
Tyr Ala Leu Asp Ile Leu Tyr Asn Ile Ile Ser Asn Glu Glu Glu
Glu Val Glu Glu Asn Ser Thr Arg Gln Ser Glu Asp Leu Gly Ser Gln
                          105
Phe Thr Glu Ile Phe Ile Lys Gln Gln Glu Asn Val Thr Leu Leu Leu
      115 120
                                        125
Ser Leu Leu Glu Glu Phe Asp Phe His Val Arg Trp Pro Gly Val Lys
                                     140
 130 135
Leu Leu Thr Ser Leu Leu Lys Gln Leu Gly Pro Gln Val Gln Gln Ile
                                  155
              150
Ile Leu Val Ser Pro Met Gly Val Ser Arg Leu Met Asp Leu Leu Ala
                              170
             165
Asp Ser Arg Glu Val Ile Arg Asn Asp Gly Val Leu Leu Leu Gln Ala
                           185
Leu Thr Arg Ser Asn Gly Ala Ile Gln Lys Ile Val Ala Phe Glu Asn
      195
                       200
                                         205
Ala Phe Glu Arg Leu Leu Asp Ile Ile Ser Glu Glu Gly Asn Ser Asp
                    215
                                      220
Gly Gly Ile Val Val Glu Asp Cys Leu Ile Leu Leu Gln Asn Leu Leu
225 230
                                  235
Lys Asn Asn Asn Ser Asn Gln Asn Phe Phe Lys Glu Gly Ser Tyr Ile
                               250
           245
Gln Arg Met Lys Pro Trp Phe Glu Val Gly Asp Glu Asn Ser Gly Trp
                          265
Ser Ala Gln Lys Val Thr Asn Leu His Leu Met Leu Gln Leu Val Arg
                       280
Val Leu Val Ser Pro Thr Asn Pro Pro Gly Ala Thr Ser Ser Cys Gln
           295
                                      300
Lys Ala Met Phe Gln Cys Gly Leu Leu Gln Gln Leu Cys Thr Ile Leu
                310
                                  315
Met Ala Thr Gly Val Pro Ala Asp Ile Leu Thr Glu Thr Ile Asn Thr
            325 330 335
Val Ser Glu Val Ile Arg Gly Cys Gln Val Asn Gln Asp Tyr Phe Ala
                        345
```

Ser	Val	Asn 355	Ala	Pro	Ser	Asn	Pro 360	Pro	Arg	Pro	Ala	Ile 365	Val	Val	Leu
Leu	Met 370	Ser	Met	Val	Asn	Glu 375	Arg	Gln	Pro	Phe	Val 380	Leu	Arg	Cys	Ala
Val 385	Leu	Tyr	Cys	Phe	Gln 390	Cys	Phe	Leu	Tyr	Lys 395	Asn	Gln	Lys	Gly	Gln 400
Gly	Glu	Ile	Val	Ser 405	Thr	Leu	Leu	Pro	Ser 410	Thr	Ile	Asp	Ala	Thr 415	Gly
Asn	Ser	Val	Ser 420	Ala	Gly	Gln	Leu	Leu 425	Cys	Gly	Gly	Leu	Phe 430	Ser	Thr
Asp	Ser	Leu 435	Ser	Asn	Trp	Cys	Ala 440	Ala	Val	Ala	Leu	Ala 445	His	Ala	Leu
Gln	Glu 450	Asn	Ala	Thr	Gln	Lys 455	Glu	Gln	Leu	Leu	Arg 460	Val	Gln	Leu	Ala
Thr 465	Ser	Ile	Gly	Asn	Pro 470	Pro	Val	Ser	Leu	Leu 475	Gln	Gln	Суѕ	Thr	Asn 480
Ile	Leu	Ser	Gln	Gly 485	Ser	Lys	Ile	Gln	Thr 490	Arg	Val	Gly	Leu	Leu 495	Met
Leu	Leu	Cys	Thr 500	Trp	Leu	Ser	Asn	Cys 505	Pro	Ile	Ala	Val	Thr 510	His	Phe
Leu	His	Asn 515	Ser	Ala	Asn	Val	Pro 520	Phe	Leu	Thr	Gly	Gln 525	Ile	Ala	Glu
Asn	Leu 530	Gly	Glu	Glu	Glu	Gln 535	Leu	Val	Gln	Gly	Leu 540	Суѕ	Ala	Leu	Leu
545	_				Tyr 550			-		555				_	560
Lys	Glu	Lys	Leu	Lys 565	Gln	Leu	Ile	Glu	Lys 570	Arg	Ile	Gly	Lys	Glu 575	Asn
			580		Gly			585	_				590		
Ala	Ser	Gln 595	Lys	Pro	Gln	Pro	Asn 600	Phe	Pro	Ser	Pro	Glu 605	Tyr	Met	Ile
	610				Thr	615				*	620		_		
625					Lys 630					635					640
				645	Glu				650					655	
			660		Gln			665					670		
		675			Cys		680					685			
	690				Ile	695			_		700				
705					Lys 710					715					720
Gly	Ala	Gln	Met	Asn 725	Gly	Ile	Gln	Pro	Glu 730	Glu	Ile	Gly	Arg	Leu 735	Arg
			740		Leu	_	_	745					750		
Leu	Thr	Glu 755	Lys	Asp	Ser	Met	Ile 760	Glu	Asn	Met	Lys	Ser 765	Ser	Gln	Thr
	770				Gln	775					780		-	-	
785					Leu 790					795					800
Leu	Asn	Ser	Gln	Ser	Val	Glu	Ile	Thr	Lys	Leu	Gln	Thr	Glu	Lys	Gln

				805					810					815	
Glu	Leu	Leu	Gln 820	Lys	Thr	Glu	Ala	Phe 825	Ala	Lys	Ser	Val	Glu 830	Val	Gln
Gly	Glu	Thr 835	Glu	Thr	Ile	Ile	Ala 840	Thr	Lys	Thr		Asp 845	Val	Glu	Gly
Arg	Leu 850	Ser	Ala	Leu	Leu	Gln 855	Glu	Thr	Lys	Glu	Leu 860	Lys	Asn	Glu	Ile
Lys 865	Ala	Leu	Ser	Glu	Glu 870	Arg	Thr	Ala	Ile	Lys 875	Glu	Gln	Leu	Asp	Ser 880
Ser	Asn	Ser	Thr	Ile 885	Ala	Ile	Leu	Gln	Thr 890	Glu	Lys	Asp	Lys	Leu 895	Glu
Leu	Glu	Ile	Thr 900	Asp	Ser	Lys	Lys	Glu 905	Gln	Asp	Asp	Leu	Leu 910	Val	Leu
Leu	Ala	Asp 915	Gln	Asp	Gln	Lys	Ile 920	Leu	Ser	Leu	Lys	Asn 925	Lys	Leu	Lys
Asp	Leu 930	Gly	His	Pro	Val	Glu 935	Glu	Glu	Asp	Glu	Leu 940	Glu	Ser	Gly	Asp
Gln 945	Glu	Asp	Glu	Asp	Asp 950	Glu	Ser	Glu	Asp	Pro 955	Gly	Lys	Asp	Leu	Asp 960
His	Ile														